

CONTRACT INSPECTION REPORT		CONTRACT NO.	TASK NO.		
TO: CONTRACT ADMINISTRATION & SETTLEMENT BRANCH/PD/OL		<input type="checkbox"/> 25X1A			
		DATE 22 August 1966			
		INSPECTION REPORT NO. (If final, so state) 13 - FINAL			
		ESTIMATED COMPLETION DATE COMPLETED			
NAME OF CONTRACTOR <div></div>					
TYPE OF COMMODITY OR SERVICE Direct (Virtual) Image Viewer					
THE CONTRACTOR IS ON SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.			
PER CENT OF WORK COMPLETED - 100%					
PER CENT OF FUNDS EXPENDED - 100%					
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If yes, give details on reverse side.)					
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)					
INCENTIVES					
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY		NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.			
OVERALL PERFORMANCE OF CONTRACTOR					
1. <input type="checkbox"/> OUTSTANDING 3. <input checked="" type="checkbox"/> ABOVE AVERAGE 5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY					
2. <input type="checkbox"/> EXCELLENT 4. <input type="checkbox"/> AVERAGE 6. <input type="checkbox"/> BARELY ADEQUATE					
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.					
RECOMMENDED ACTION					
<input type="checkbox"/> CONTINUE AS PROGRAMMED <input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE					
<input checked="" type="checkbox"/> TERMINATE <input type="checkbox"/> OTHER (Specify)					
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:					
ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES	<input checked="" type="checkbox"/>		MANUALS	<input checked="" type="checkbox"/>	
DRAWINGS AND SPECIFICATIONS	<input checked="" type="checkbox"/>		FINAL REPORT	<input checked="" type="checkbox"/>	
PRODUCTION AND/OR OTHER END ITEMS		<input checked="" type="checkbox"/>	SPECIAL TOOLING		<input checked="" type="checkbox"/>
			OTHER GOVERNMENT PROPERTY	<input checked="" type="checkbox"/>	
DATE OF LAST CONTACT WITH CONTRACTOR N/A					
DECLASS REVIEW by NIMA/DOD					
SIGNATURE OF INSPECTOR 25X1A <div></div>			DIVISION P&DS		
INSPECTOR'S EXTENSION <div></div>			SIGNATURE <div></div> 25X1A		

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Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

NARRATIVE REPORT

☐ INTERIM☒ FINAL

Final inspection of the Direct Image Viewer has been completed at NPIC, and the following findings regarding this contract have been made:

1. In general, the Viewer's mechanical design, fabrication, and performance are entirely acceptable. For an experimental prototype (breadboard), the Viewer is an extremely clean and thoughtfully developed piece of equipment. In fact, the contractor has put considerably more effort into the Viewer than was required under the contracted feasibility study.

2. The most critical contractual specifications and 25X1A subsequent fulfillment of each include the following:

a. Magnification - dual individual magnification of 5X and 50X: objective met.

b. Film size - capability for accepting single chips of either 70 X 100 mm or 4 X 5 inches: objective met.

c. Exit pupil size - composite exit pupil of 3.5 inches square: objective met.

d. System resolution - at 50X, 200 lines/mm for high contrast target on axis: objective met and surpassed; without auxiliary magnification, on axis resolution of nearly 400 lines/mm high contrast and approximately 200 lines for low contrast (informal, ultimate goal).

e. Light intensity - sufficient brightness to allow the measurement of a 0.05 density difference over a required density range of 0 to 1.8: objective met and surpassed; density differences measurable through at least density 2.1.

f. Film positioning - remote film positioning capability through X and Y translations permitting full coverage viewing areas for either 70mm or 5 inch film chips: objective met.

g. Focusing - separate manual fine focus controls for each lens magnification: objective met.

h. Viewer controls - front panel mounted set including Power - On/Off; Illumination Intensity; Magnification Selector, 5X and 50X; Lens Focus, 5X and 50X; Film Translation, ± 1 inch in X, ± 1 inch in Y: objectives met.

i. Physical size - approximate dimensions of 66 inches (length) X 29 inches (width) X 26 inches (height): objective met.

3. The primary limitation of the Direct Image Viewer at present is the non-uniform illumination intensity transmitted by the diffraction grating. As stated in the previous inspection report, this critical fault is due to limitations in the state-of-the-art and not to any performance debit on the part of has carried the blasing technique of grating ruling to its apparent limit, but the results have been less than satisfactory for operational usefulness. In an attempt to correct this problem, the Exploratory Development Laboratory of RDS is currently pursuing research to develop a

(Continued)

25X1A

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technique for chemically etching diffraction gratings of the required quality. Promising results have been forthcoming recently, and if such an alternative method is perfected, the Viewer will realize its potential value, and a follow-on program can be initiated.

4. The technical representative of the contracting officer hereby assesses the overall performance of [] under [] as "above average" and certifies that all deliverable items have been received, with the exception of a second set of optics which have been granted "delivery in place" status and may be lent to the Navy for further development.

25X1A

25X1A

25X1A

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CONTRACT INSPECTION REPORT			CONTRACT NO.	TASK NO.	
TO: CONTRACT ADMINISTRATION & SETTLEMENT BRANCH/PD/OL			25X1A		
			DATE 3 June 1966		
			INSPECTION REPORT NO. (If final, so state) 12		
			ESTIMATED COMPLETION DATE 29 March 1966 (Delivery)		
NAME OF CONTRACTOR 25X1A					
TYPE OF COMMODITY OR SERVICE Direct Virtual Image Viewer					
THE CONTRACTOR IS ON SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.		
PER CENT OF WORK COMPLETED - 100%					
PER CENT OF FUNDS EXPENDED - 100%					
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If yes, give details on reverse side.)					
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)					
INCENTIVES					
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY			NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.		
OVERALL PERFORMANCE OF CONTRACTOR					
1. <input type="checkbox"/> OUTSTANDING 3. <input checked="" type="checkbox"/> ABOVE AVERAGE 5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY					
2. <input type="checkbox"/> EXCELLENT 4. <input type="checkbox"/> AVERAGE 6. <input type="checkbox"/> BARELY ADEQUATE					
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.					
RECOMMENDED ACTION					
<input type="checkbox"/> CONTINUE AS PROGRAMMED <input checked="" type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE					
<input type="checkbox"/> TERMINATE <input type="checkbox"/> OTHER (Specify)					
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:					
ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		
DATE OF LAST CONTACT WITH CONTRACTOR 10 March 1966 - Final contract monitoring visit.					
SIGNATURE OF INSPECTOR 25X1A			DIVISION RDS		
INSPECTOR			25X1A		

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Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

NARRATIVE REPORT

☒ INTERIM

☐ FINAL

On 10 March 1966, a contract-monitoring visit was made to [redacted] Final field inspection of the Viewer was performed at that time. Those in attendance were [redacted]

[redacted] or NPIC/P&DS. The Viewer was judged to have met all the technical specifications promised by [redacted] but to have fallen short on the more intangible, subjective goals. In order to achieve these further objectives, specifically, to improve the uniformity of illumination of the presented image, an additional effort to refine the production of the diffraction gratings will probably be sponsored by NPIC/P&DS in the near future. As yet, the contractor for this work has not been determined. In any case, such an effort will be limited by the present state-of-the-art in the emulsion-coating of photographic plates. The necessity for this further investigation should not be construed as reflecting any unsatisfactory performance by [redacted] since it, too, was restricted by the same technological barriers.

On 29 March 1966, the Viewer arrived at NPIC via Air Freight. On 12 April, it was uncrated by [redacted] personnel and demonstrated for the P&DS. Final inspection procedures at NPIC, are currently in progress, and a final inspection report will be issued upon completion.

STATINTL

Approved For Release 2002/06/17 : CIA-RDP78B0474A001500020028-4

MEMORANDUM RECEIPT

FILE 992094

4 March 1966
DATE

TO:

[Redacted]

FROM:

SUBJECT: G. F. E.

I hereby acknowledge receipt of the following:

- 1 - Microflat Grating # 229
- 1 - Microflat Grating # 469

STATINTL

Hold
Please ~~return~~ 1 signed copy(ies) of this receipt

For
~~to~~ Contract Monitor Visit

FORM NO. 752
1 AUG 55

REPLACES FORM 752
WHICH MAY BE USED.

Approved For Release 2002/06/17 : CIA-RDP78B0474A001500020028-4

[Redacted]

3-7-66

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CONTRACT INSPECTION REPORT		CONTRACT NO. <div style="border: 1px solid black; display: inline-block; width: 50px; height: 20px;"></div> 25X1A	TASK NO.		
TO: CONTRACT ADMINISTRATION & SETTLEMENT BRANCH/PD/OL		DATE 2 February 1966			
		INSPECTION REPORT NO. (If final, so state) 11			
		ESTIMATED COMPLETION DATE 28 February 1966			
NAME OF CONTRACTOR <div style="border: 1px solid black; display: inline-block; width: 250px; height: 20px;"></div>					
TYPE OF COMMODITY OR SERVICE Direct Virtual Image Viewer					
THE CONTRACTOR IS ON SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED. Slight Overrun			
PER CENT OF WORK COMPLETED - 97%					
PER CENT OF FUNDS EXPENDED - 99%					
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, give details on reverse side.)					
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)					
INCENTIVES					
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY		NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.			
OVERALL PERFORMANCE OF CONTRACTOR					
1. <input type="checkbox"/> OUTSTANDING	3. <input checked="" type="checkbox"/> ABOVE AVERAGE	5. <input type="checkbox"/> BELOW AVERAGE	7. <input type="checkbox"/> UNSATISFACTORY		
2. <input type="checkbox"/> EXCELLENT	4. <input type="checkbox"/> AVERAGE	6. <input type="checkbox"/> BARELY ADEQUATE			
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.					
RECOMMENDED ACTION					
<input checked="" type="checkbox"/> CONTINUE AS PROGRAMMED		<input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE			
<input type="checkbox"/> TERMINATE		<input type="checkbox"/> OTHER (Specify)			
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:					
ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		
DATE OF LAST CONTACT WITH CONTRACTOR 19 January 1966					
SIGNATURE OF INSPECTOR 25X1A <div style="border: 1px solid black; display: inline-block; width: 150px; height: 40px;"></div>			DIVISION P & D S		
INSPECTOR'S E <div style="border: 1px solid black; display: inline-block; width: 150px; height: 40px;"></div>			SIGNATURE OF APPROVER		

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NARRATIVE REPORT

☒ INTERIM

☐ FINAL

25X1A

On 19 January 1966, a monitoring trip was made to [redacted]
Those in attendance were [redacted]

25X1A

25X1A

The present contract will be terminated within several weeks upon final inspection of the Viewer with new P&DS/EDLB diffraction gratings employed. At that time, it will be decided whether or not a new contract for further development of improved gratings will be required. Such a contract would not necessarily be with [redacted]

25X1A

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CONTRACT INSPECTION REPORT			CONTRACT NO.		TASK NO.	
TO: CONTRACT ADMINISTRATION & SETTLEMENT BRANCH/PD/OL			<input type="checkbox"/> 25X1A			
			DATE 15 November 1965			
			INSPECTION REPORT NO. (If final, so state) 10			
			ESTIMATED COMPLETION DATE 31 December 1965			
NAME OF CONTRACTOR 25X1A						
TYPE OF COMMODITY OR SERVICE Direct (Virtual Image Viewer)						
THE CONTRACTOR IS ON SCHEDULE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO			THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.			
PER CENT OF WORK COMPLETED - 95%						
PER CENT OF FUNDS EXPENDED - 95%						
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, give details on reverse side.)						
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)						
INCENTIVES						
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY			NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.			
OVERALL PERFORMANCE OF CONTRACTOR						
1. <input type="checkbox"/> OUTSTANDING		3. <input checked="" type="checkbox"/> ABOVE AVERAGE		5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY		
2. <input type="checkbox"/> EXCELLENT		4. <input type="checkbox"/> AVERAGE		6. <input type="checkbox"/> BARELY ADEQUATE		
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.						
RECOMMENDED ACTION						
<input checked="" type="checkbox"/> CONTINUE AS PROGRAMMED			<input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE			
<input type="checkbox"/> TERMINATE			<input type="checkbox"/> OTHER (Specify)			
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:						
ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY	
PROTOTYPES			MANUALS			
DRAWINGS AND SPECIFICATIONS			FINAL REPORT			
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING			
			OTHER GOVERNMENT PROPERTY			
DATE OF LAST CONTACT WITH CONTRACTOR 9 November 1965						
SIGNATURE OF INSPECTOR 25X1A			DIVISION P & D S			
INSPECTOR'S			SIGNATURE OF APPROVER			

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Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

NARRATIVE REPORT

☒ INTERIM☐ FINAL

On 3 November 1965, a monitoring trip was made to [REDACTED]
Those in attendance were [REDACTED]
[REDACTED]

NPIC/PADS. In addition, on 9 November, [REDACTED] conferred
briefly with [REDACTED] at NPIC.'

25X1A

The [REDACTED] 10" x 10" grating was delivered recently
to [REDACTED] as was a grating produced in the PADS Exploratory
Development Laboratory. Neither has proven to be of the desired
quality, but we expect that an improved grating from PADS/EDLS
should be available in mid-December. An additional monitoring
trip will be scheduled at that time, and delivery of the Viewer
may be expected early next year.

GFE: 1 - 10" x 10" micro-flat - \$200

1 - high resolution film chip

1 - precision resolution chart - \$500

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CONTRACT INSPECTION REPORT		CONTRACT NO.	TASK NO.		
TO: ENGINEERING SECTION/CB/PD/OL		<input type="checkbox"/> 25X1A			
		DATE 14 September 1965			
		INSPECTION REPORT NO. (If final, so state) 9			
		ESTIMATED COMPLETION DATE 15 October 1965			
NAME OF CONTRACTOR <div></div>					
TYPE OF COMMODITY OR SERVICE Direct (Virtual) Image Viewer					
THE CONTRACTOR IS ON SCHEDULE <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.			
PER CENT OF WORK COMPLETED - 75%					
PER CENT OF FUNDS EXPENDED - NA					
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, give details on reverse side.)					
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)					
INCENTIVES					
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY		NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.			
OVERALL PERFORMANCE OF CONTRACTOR					
1. <input type="checkbox"/> OUTSTANDING 3. <input checked="" type="checkbox"/> ABOVE AVERAGE 5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY					
2. <input type="checkbox"/> EXCELLENT 4. <input type="checkbox"/> AVERAGE 6. <input type="checkbox"/> BARELY ADEQUATE					
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.					
RECOMMENDED ACTION					
<input checked="" type="checkbox"/> CONTINUE AS PROGRAMMED <input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE					
<input type="checkbox"/> TERMINATE <input type="checkbox"/> OTHER (Specify)					
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:					
ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		
DATE OF LAST CONTACT WITH CONTRACTOR 20 August 1965, Monitoring Trip					
SIGNATURE OF INSPECTOR <div></div>			DIVISION P & D S		
INSPEC			SIGNATURE OF APPROVER		

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☐ UNCLASSIFIED

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

NARRATIVE REPORT

☒ INTERIM

☐ FINAL

25X1A On 20 August 1965, a monitoring trip was made to [REDACTED] 25X1A
25X1A [REDACTED] to inspect the Direct (Virtual)
Image Viewer. Attendees were as follows: [REDACTED] 25X1A
[REDACTED]
25X1A [REDACTED]

25X1A The main purpose of the trip was to orient [REDACTED] the 25X1A
new contract monitor, to the scope and status of the contract.
No substantial changes have been reported since the last
inspection report. This contract is basically static until
delivery by [REDACTED] of the 10" by 10" grating.

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CONTRACT INSPECTION REPORT

CONTRACT NO.

☐ 25X1A

TASK NO.

10:

ENGINEERING SECTION/CB/PD/OL

DATE

15 June 1965

INSPECTION REPORT NO. (If final, so state)

ESTIMATED COMPLETION DATE

15 October 1965

NAME OF CONTRACTOR

25X1A

TYPE OF COMMODITY OR SERVICE

Direct (Virtual) Image Viewer

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED - 75%

PER CENT OF FUNDS EXPENDED - Not Known

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT
IF YES, CHECK TYPE

☒ YES

☐ NO

☒ COST

☐ PERFORMANCE

☐ DELIVERY

NOTE:

USE REVERSE SIDE FOR COMMENTS.

FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☒ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☐ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING
SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

24-25 May 1965, Monitoring Trip

SIGNATURE OF INSPECTOR

25X1A

DIVISION

P & D 3

INSPECTOR'S

SIGNATURE OF APPROVER

FORM
10-64

1897

USE
PREVIOUS
EDITION

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

☐ UNCLASSIFIED

☒ CONFIDENTIAL

☐ SECRET

(12-36)

☐ SECRET

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

☒ CONFIDENTIAL

☐ UNCLASSIFIED

NARRATIVE REPORT

☒ INTERIM

☐ FINAL

Trip to [] 25X1A

25X1A

On 24-25 June, a monitoring trip was made to []
[] to inspect the Direct (Virtual) Image Viewer.
Attendees were as follows: []

25X1A

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*

25X1A

25X1A

25X1A

The viewer has been completed and was ready for demonstration. The unit, though primarily a breadboard, is well engineered and shows evidence of good machine shop practice. An acceptable 10" by 10" grid was not available; however, [] has produced a 2" by 2" grating which, while not ideal, must (from a practical standpoint) be considered to be acceptable. [] of PADS/EDLE, provided a 10" by 10" photo etched grid which, while not totally acceptable, permitted us to utilize and test the entire aperture of the viewer. The monitor was generally pleased with the viewer but one major problem area was encountered -- distortion, caused by the field lens. This results from the front element only and, in retrospect, was predictable. There are two basic solutions to this problem (1) a redesign of the field lenses, and (2) a redesign of the format to make the distortion less obvious. Because of the cost and time considerations involved in the first option, and because this is basically only a test bed, the monitor intends to pursue the second approach.

Furthermore, a decision was made to have [] continue with an effort to produce an acceptable 10" by 10" grating. [] Systems was instructed to obtain a firm quote from [] and to proceed on the larger grating. Since an acceptable 10" by 10" grating is not currently available, [] was instructed to retain the viewer until a acceptable 10" X 10" grating has been produced or until such time as we request shipment.

25X1A

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25X1A

A number of minor changes were requested primarily involving the control panel. These modifications have been accomplished.

25X1A

[] who happen to be
[] on the 23rd, were present at the first demonstration.

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☒ CONFIDENTIAL

☐ SECRET

~~CONFIDENTIAL~~RESEARCH AND DEVELOPMENT
PROJECT APPROVAL REQUESTApproved 7 JAN
1965I. Identification

25X1A

The Plans and Development Staff proposes a change of scope in [redacted], titled "Direct (Virtual) Image Viewer." The change involves an appreciable engineering modification which will extend the viewer's capability and which can therefore be considered to comprise a change of scope.

The change would require funding of [redacted] which would be provided from NPIC's FY-65 financial plan under Category II, "Viewers and Other Interpretation Equipment." These funds are available because of cancellation of projects as a result of an extensive review of the photographic chip system.

25X1A

II. Objectives

Specifically, the change would entail modification of the film positioning mechanism to not only accept but also translate a full 4" X 5" format at the viewer's highest magnification -- 50X. In addition, the platen would be redesigned to incorporate a film hold-down which will accommodate the larger chips and hold them accurately flat. Although experimental in nature and to be used with film chips only, the viewer would then have the precision, versatility and film-handling capability necessary for practical use and a meaningful (in-house) evaluation.

III. Background

Briefly, the virtual image viewer is capable of presenting the eye directly with ultra-high resolution aerial images which can be viewed simultaneously with both eyes, at magnifications of 5X (60 l/mm) and 50X (200 l/mm) in a 3.5" X 3.5" pupil field.

Because the viewer is not limited in resolution by a diffusing screen and because it can deliver the image directly to the human eye, its performance is comparable in quality to advanced microscope viewing. To achieve such a high transfer of information, the viewer makes use of an unique optical approach involving diffraction gratings.

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~

As originally conceived, the virtual image viewer was to be built more as an experimental model proving an unconventional optical concept than as a "prototype" leading to production. That concept was determined feasible in both theory and in rough, breadboard-type setups during a preceding contract. Consequently, quality of the optical system was to be emphasized and a trend of austerity to be followed in the mechanical parts. It was felt that supplemental components could be refined upon--if proven necessary -- for the production version.

An expanded film translation which would permit full inspection of a standard 4" X 5" chip was requested after the fact of contracting, for it was then decided that such a modification would widen the viewer's use and the range of materials that could be viewed. Original specifications included provision for only 70 mm formats.

At the time of the request the modification was considered by both monitor and contractor to be a simpler problem and was therefore to be assumed as a natural part of the development process, without additional cost to us.

However, our requirement for two inches more of translation capability made the difference in the threshold between a simple design and another more complex design requiring different materials and a motor drive. Any provisional rig would work to the disadvantage of the optics, since film positioning vitally affects optical alignment -- which is particularly critical in this instrument.

Exploratory Development Lab engineers have reviewed blueprints of the changes and apprise the quote to be not only realistic but also moderate.

25X1A

IV. Technical Specifications

1. The new version of the film hold-down (part of the overall film positioning device) should provide an accurately flat film plane with no air entrapments.
2. Film platens (one for 70 mm and the other for the 4" X 5" format) should be interchangeable and easily removable for loading of the chips for viewing.
3. A rigid platen mechanism is required to keep viewer focusing operations to a minimum.
4. The translation mechanism should cover ± 2 inches in both X- and Y-directions or a total of 4 inches in both X and Y across the format.
5. When a change is made in magnification, the same lens-centered image should be presented for viewing.

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~~CONFIDENTIAL~~

V. Contractual Arrangements

The existing contract for the Virtual Image Viewer is a Fixed Price Incentive Contract (cost incentive only). Thus the only mode for awarding additional funds is as a "change of scope."

VI. Security

The current contract is being handled under ☐ security measures already in effect. Association with the sponsor is classified, but the concept and the instrument is not.

25X1A

~~CONFIDENTIAL~~

~~SECRET~~

NPIC/TDC/A-9-65

TECHNICAL DEVELOPMENT COMMITTEE

AGENDA

Time: 1030, 7 January 1965

Place: 4N 411

1. Announcements

a. Approval of Minutes

b. New Proposals: Eight new proposals, listed below, have been received since the last meeting. If you have any interest in reading these proposals they are available in the Plans and Development Staff.

- | | | |
|-------|--|--|
| 64/65 | Modification of the [] VG-1 Enlarger's Film Transport, [] | 25X1A |
| | | 25X1A |
| 65/65 | Modification of the [] VG-1 Enlarger's Film Transport, [] | 25X1A |
| | | 25X1A |
| 66/65 | Advanced Tactical Image Interpretation Facility Subsystem Study, [] | 25X1A |
| 25X1A | 67/65 | Modification of [] VG-1 Enlarger's Film Transport, [] |
| | | 25X1A |
| 25X1A | 68/65 | [] Microscope Objectives, [] |
| 25X1A | | [] |
| | 69/65 | Request for Extension of [] and Authorization of Overrun (Change Detector), [] |
| | | [] |
| | | 25X1A |
| | | 25X1A |
| 25X1A | 70/65 | Price Quotation for Bi-directional Counter, [] |
| | | [] |
| 25X1A | 71/65 | Study of Image Restoration, Technical Operations Research, [] |
| | | [] |

~~SECRET~~

~~SECRET~~

2. Discussion of New Business

- a. Change in Scope of [] Direct (Virtual) Image Viewer, with [] 25X1A
25X1A
- b. Coincident Photo/Radar Techniques, [] 25X1A
[]

3. Evaluation of Contract Proposals

The following proposals have been evaluated as of no interest at the present time:

- 25X1A 198/63 Mark II Multiple Image Correlator, []
- 9/65 Binocular Magnifier, [] 25X1A
- 25X1A 10/65 Binocular Tube Magnifier, [] 25X1A
[]
- 41/65 Film Editing Table, [] 25X1A
[]
- 25X1A 45/65 Technical Proposal & Cost Quotation RFP No. RD-2-65, [] 25X1A
- 56/65 Film Editing Table, [] 25X1A

Distribution:

- | | | |
|-----------------------|--------------------|-------|
| 1 - Chairman, TDC | 1 - Chief, CIA/PID | |
| 1 - Exec. Dir. | 1 - Chief, SPAD | |
| 1 - Asst. for Admin. | 1 - [] | 25X1A |
| 1 - Chief, SS | | |
| 1 - Chief, MSS | | |
| 1 - MSS/BFAB | | |
| 1 - SS/Security Br. | | |
| 1 - SS/Logistics Br. | | |
| 1 - Asst. for Ops. | | |
| 1 - Dep. Asst. for PA | | |
| 1 - Chief, CSD | | |
| 1 - Chief, PD | | |
| 1 - Chief, PSD | | |
| 1 - Chief, TID | | |
| 1 - Chief, IPD | | |

~~SECRET~~

CONTRACT INSPECTION REPORT			CONTRACT NO.		TASK NO.		
TO: ENGINEERING SECTION/CB/PD/OL			25X1A		DATE 5 April 1965		
					INSPECTION REPORT NO. (If final, so state) 7		
			ESTIMATED COMPLETION DATE 15 October 1965				
			NAME OF CONTRACTOR <div></div>				
TYPE OF COMMODITY OR SERVICE Direct (Virtual) Image Viewer							
THE CONTRACTOR IS ON SCHEDULE <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO			THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.				
PER CENT OF WORK COMPLETED - 70%							
PER CENT OF FUNDS EXPENDED -							
HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, give details on reverse side.)							
HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO (If yes, indicate items, quantity, and cost on reverse side.)							
INCENTIVES							
IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE <input checked="" type="checkbox"/> COST <input type="checkbox"/> PERFORMANCE <input type="checkbox"/> DELIVERY			NOTE: USE REVERSE SIDE FOR COMMENTS. FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.				
OVERALL PERFORMANCE OF CONTRACTOR							
1. <input type="checkbox"/> OUTSTANDING 3. <input checked="" type="checkbox"/> ABOVE AVERAGE 5. <input type="checkbox"/> BELOW AVERAGE 7. <input type="checkbox"/> UNSATISFACTORY							
2. <input type="checkbox"/> EXCELLENT 4. <input type="checkbox"/> AVERAGE 6. <input type="checkbox"/> BARELY ADEQUATE							
IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.							
RECOMMENDED ACTION							
<input checked="" type="checkbox"/> CONTINUE AS PROGRAMMED <input type="checkbox"/> WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE							
<input type="checkbox"/> TERMINATE <input type="checkbox"/> OTHER (Specify) <u>None</u>							
IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:							
ITEM		REC'D	DOES NOT APPLY	ITEM		REC'D	DOES NOT APPLY
PROTOTYPES				MANUALS			
DRAWINGS AND SPECIFICATIONS				FINAL REPORT			
PRODUCTION AND/OR OTHER END ITEMS				SPECIAL TOOLING			
				OTHER GOVERNMENT PROPERTY			
DATA <div></div>							
SIGNATURE <div></div>			DIVISION 25X1A				
DATE 11			SIGNATURE <div></div>				

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Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

NARRATIVE REPORT

☒ INTERIM

☐ FINAL

[] has assembled the viewer prototype, including the optics received to date from []. The prime contractor is now awaiting [] second trial grating (due 7 May) and the remainder of the optics from [].

[] project engineer reported that sub-contractor [] is one month behind schedule; the delay will not have any detrimental effect on the overall schedule since [] is still running well ahead of their (15 October 1965) deadline.

The [] expects to have its grating ready by the middle of April when it will be delivered directly to []. Early in May we will evaluate [] second trial grating either at their [] facilities or at [], depending upon [] preference to try the grating in the actual prototype or in a simulated set-up.

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☐ CONFIDENTIAL

☐ UNCLASSIFIED

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

CONTRACT INSPECTION REPORT

CONTRACT NO.

TASK NO.

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

1 February 1965

INSPECTION REPORT NO. (If final, so state)

6

ESTIMATED COMPLETION DATE

15 October 1965

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

Direct (Virtual) Image Viewer

THE CONTRACTOR IS ON SCHEDULE



YES



NO

PER CENT OF WORK COMPLETED -

50%

PER CENT OF FUNDS EXPENDED -

--

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

INCENTIVES

IS THIS AN INCENTIVE CONTRACT IF YES, CHECK TYPE



YES



NO



COST



PERFORMANCE



DELIVERY

NOTE:

USE REVERSE SIDE FOR COMMENTS.

FINAL REPORT MUST CONTAIN INCENTIVE EVALUATION.

OVERALL PERFORMANCE OF CONTRACTOR

1.



OUTSTANDING

3.



ABOVE AVERAGE

5.



BELOW AVERAGE

7.



UNSATISFACTORY

2.



EXCELLENT

4.



AVERAGE

6.



BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION



CONTINUE AS PROGRAMMED



WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE



TERMINATE



OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT PUT COMMENTS ON REVERSE IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

29 JAN 65

SIGNATURE OF INSPECTOR

DIVISION

INSF

F&DS

SIGNATURE OF APPROVER

FORM 10-64

1897

USE PREVIOUS EDITION

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

☐ CONFIDENTIAL

☐ SECRET

(12-36)

NARRATIVE REPORT

☐ INTERIM

☐ FINAL

- 25X1A 1. [] The design of the viewer is complete, and the detailing of all mechanical parts is complete, with eighty per cent of them fabricated.
- 25X1A [] seems to be executing its part of the work with competence and thoroughness and has, in fact, performed much of its work ahead of the original schedule.
- 25X1A The project engineer's presentation to us during the 29 January meeting in [] was very satisfactory, and our criticisms of the viewer mechanics were minimal. The customer is planning to provide a small, inexpensive vacuum pump
- 25X1A [] which will be external to the viewer and will be ready at customer facilities to hook up to the viewer for its film hold-down system.
- 25X1A []'s 2nd quarterly report has been received and approved by the contract monitor.
- 25X1A 2. [] This subcontractor is designing and fabricating the optics and has had difficulty in obtaining a sufficiently strain-free batch of glass from abroad. Consequently, [] schedule has slipped by two months. It is predicted, however, that all optical elements will be delivered to [] by 22 March. 25X1A
- The overall schedule remains unaffected, for it appears that the viewer will still be ready a few months before contract termination date.
- 25X1A 3. [] The meeting in [] was held at [] facilities and 25X1A 25X1A involved an evaluation of [] first experimental grating for the viewer.
- 25X1A [] had prepared a report including calculations and graphs of the results of their own tests on the gratings. They had also set up optics for viewing the grating with an aerial image, at approximately 5X.
- 25X1A The results of the [] Phase II, trial #1, were not especially encouraging. The ruling exhibited characteristics of blaze, whose visual effect was an unevenness of intensity between spectral orders or an alternation of intensity across the 3.5" x 3.5" field of exit pupils.
- While the diamond used to shape the grooves was ground circular, the resulting grooves did not take a circular cross-section. The imperfections were not corrected by double-ruling -- indicating that no matter how many rulings are made, a circular groove shape will be difficult, if not impossible, to obtain. The measured spectral intensities did not begin to approach the calculated values, which in themselves had narrowly missed specifications. Moreover, in view of the failure to match the theoretical groove shape, there is little likelihood that the first selected groove shape and radius would ever yield intensities whose range is visually acceptable.
- 25X1A For Phase II, Trial #2, [] suggests the same technique but with a period length exactly twice that of their first ruling. In effect, this would double the number of spectral orders so that there would be an overlapping of exit pupils when the grating is used in the direct image viewer. The overlapping could average the energy in the wayward orders. This approach has feasibility if the resulting spectral distribution is not asymmetric and does not elicit differences of intensity too large to benefit from whatever averaging is possible. []

(Continued)


25X1A

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Narrative (Continued)

feels that with this technique they would be improving on the theoretical possibilities rather than merely trying to approach a less-than-perfect theoretical solution. In other words, they acknowledge that no grating will live up to its theoretical promise, but they want the theoretical calculations to be outstanding enough so that the grating will fall short in a still acceptable range.

25X1A

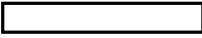


 also suggests double- and possibly triple-ruling to reduce the blaze: an additional month for tooling but no additional funding would be required.

25X1A

 believes that the second trial will decide everything: 1) if the trial is reasonably successful, they will go directly to the larger ruling; 2) if the trial proves futile, they will in all honesty consider their effort to have proven that our requirements exceed their present grasp of the craft.

It is not anticipated, then, that there will be any third or fourth experimental trial as provided for in the contracts.

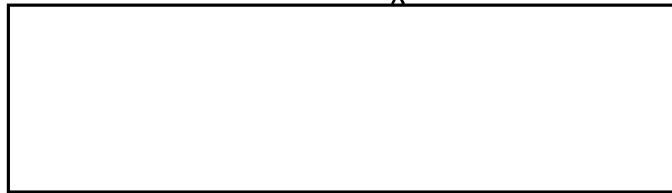
It should be noted, at this point, that there can be no safe prediction that the successful experimental (2" x 2") ruling can be just as successfully reproduced on a 10" x 10" surface -- since the ruling of diffraction gratings still remains pretty much of an art.

Finally, we recommended that  authorize  to proceed with their second trial grating. At the culmination in May of Phase II, trial #2, a reappraisal of the entire program -- particularly in light of the  results by that time -- would be appropriate.

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25X

25X1A



25X1A



12 April 1965

25X1A



During your last visit to our facility we agreed that I would send you a letter the beginning of April with information regarding our delivery of the optical components to [redacted]

25X1A

25X1A

Due to pressure from various sources, we have encountered some delays. We expect, however, that [redacted] will visit us on April 27, 1965 to witness the acceptance tests. Delivery will be immediately thereafter.

If I understand the situation correctly, this timing fits in rather well with the grating fabrication schedule.

Sincerely yours.

25X1A



AW:aq

CONFIDENTIAL

SECRET

Approved For Release 2002/06/17 : CIA-RDP78B0470004600020028-4
CONTRACT INSPECTION REPORT

CONTRACT NO.

25X1A

TASK NO.

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

4 Dec 64

INSPECTION REPORT NO. (If final, so state)

5

ESTIMATED COMPLETION DATE

15 October 1965

NAME OF CONTRACTOR

25X1A

TYPE OF COMMODITY OR SERVICE

Direct (Virtual) Image Viewer

THE CONTRACTOR IS ON SCHEDULE



YES



NO

PER CENT OF WORK COMPLETED

35%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☐ YES ☒ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED. See reverseHAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING3. ☐ ABOVE AVERAGE5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY2. ☐ EXCELLENT4. ☒ AVERAGE6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION



CONTINUE AS PROGRAMMED



WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE



TERMINATE



OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

2 Dec 64

SIGNATURE OF INSPECTOR 25X1A

DIVISION

25X1A

INSPECTOR

25X1A

[] submitted its first quarterly report (dated 13 October) and in that document formally summarized a change of scope which the contractor was proposing and which had been informally postulated as engineering changes by the [] project engineer at a September 25 meeting in []. The information was not sufficiently detailed for a decision by the contract monitor.

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25X1A

25X1A

25X1A

The actual engineering change proposal [] No. 7506) was dated 22 October but was not received by the technical monitor until the third week in November. Since that time a telephone conversation with the [] project engineer revealed that the contractor would withdraw one of the two proposed changes which he felt constituted a "change of scope." [] decided to expunge the light source change when they discovered that an high-wattage projection lamp would do the job for which a xenon arc was being considered.

25X1A

Consequently, modification of the film positioning device remains the sole point upon which the contractor now bases a change of scope. The amount requested for the new design of that component is []. In-house engineers have reviewed blueprints and apprise the [] quote to be not only realistic but also very moderate.

25X1A

25X1A

It is our judgment that such a change does comprise a change of scope by contractually acceptable definitions.

25X1A

The proposed change was thoroughly reviewed -- back to the [] proposal which we had accepted and contracted for. It was found that, although [] historical account did not agree entirely with ours, there was a preference stated and an informal request made on our part shortly after negotiation of the contract. The viewer was to "accomodate" or "accept" not only 70mm chips but also 4" x 5" chips; however, it would only be capable of translating over a 70mm area at the 50x magnification. The request for expanded translation was informally made by the original monitor -- primarily to clarify a technical misunderstanding which was documented in a set of specifications which followed the contract.

25X1A

Our request was legitimately interpreted by [] When first made, though, it was considered by both parties to be simpler to implement and was to be assumed as a result of having further refined specifications -- as a natural part of the development process. At the time, the request seemed straightforward and in keeping with the concept of austerity set (by us) for viewer mechanics.

25X1A

But, in fact, our request for a total of two inches more of translation capability made the difference between what one simple design using a cam principle couldn't fulfill and what another design requiring different materials and a motor drive could accomplish. Any skimpier arrangement would work to the disadvantage of the optics, whose quality is being emphasized in this development.

We are clearly investing in the future of the development, since this is one of the minor components which grew in scope and which will not have to be redesigned if this experimental viewer fulfills expectations.

It should be mentioned here that on none of the other points originally cited for change of scope by [] would we have conceded. Upon review, these latter proved to be areas in which [] was contractually bound and clearly responsible for a full effort.

25X1A

In addition, it is to [] merit that they were willing to proceed on the new film partitioning device without waiting for word of additional funds.

Final approval is in the process of being secured through formal channels. West coast contracting will be informed, without delay, of the outcome.

25X1A
25X1A

SECRET
(When Filled In)

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4
CONTRACT INSPECTION REPORT

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

3 Nov 64

INSPECTION REPORT NO. (If final, so state)

4

ESTIMATED COMPLETION DATE

15 Oct 65

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

Direct (Virtual) Image Viewer

THE CONTRACTOR IS ON SCHEDULE



YES



NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☐ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED. See reverse

PER CENT OF WORK COMPLETED

30%

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☒ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☐ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION



CONTINUE AS PROGRAMMED



WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE



TERMINATE



OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

ITEM	REC'D	DOES NOT APPLY	ITEM	REC'D	DOES NOT APPLY
PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

25 Sept 64 Subcontractor: 30 Oct 64

SIGN

DIVISION

P&DS

25X1A

INSP

FORM 1897
6-64

USE
PREVIOUS
EDITION

SECRET

GROUP 1
Excluded from automatic
downgrading and
declassification

(12-36)

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4

25X1A

25X1A

[redacted], has verbally requested additional funds up to a maximum figure of [redacted] for the company's (as opposed to a subcontractor's) own part in producing the prototype. The company claims that in particular two aspects of the fabrication have become more sophisticated in the course of the design.

25X1A

Formal and official request and accompanying justification have not yet been received by the monitor; however, a request in writing is imminent. The request will be submitted as a "change of scope" -- by [redacted] definition of the term -- because this was the only alternative under a CPFF contract.

25X1A

The contract monitor was informed by [redacted] Station 954, of his meeting with [redacted] to discuss the proposed request. During that meeting it was established that the ceiling price set for the contract would cover additional costs but, of course, at the expense of target cost and for a lesser profit to the company.

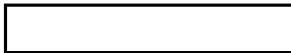
25X1A

When the first quarterly report and request for additional funding is received, we will suggest appropriate action. At this time, however, it seems doubtful that we will approve a change of scope as such.

ACCEPTED

26 August 1964

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25X1A

The following comments are in regard to the optical mechanical configuration of the direct image viewer. As you may recall, [redacted] requested that if equally feasible, the dual magnification should be done in line rather than the dual path which required two mirrors.

25X1A

I spent considerable time^{W/US} [redacted] of [redacted] on 19 and 20 August in reviewing this subject. The approach was to keep the mechanical and optical portions as simple as possible. We concluded that the dual path method, even though it required two small mirrors when 5X is used, provides the most practical solution.

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25X1A

The following points may be of interest in reviewing our decision.

- A. Functions and operations required at each magnification position:
 - 1. Blow air over film
 - 2. Control light intensity
 - 3. Move film in X and Y
 - 4. Manually fine focus each lens
 - 5. Blow air over lamp for cooling.
- B. Functions required when changing magnification with the dual system presented:
 - 1. Move mirror in or out of path.
 - 2. Translate film to other magnification position (9" lateral movement)
- C. Functions required when changing magnification with the in line approach:
 - 1. Exchange objective lenses
 - 2. Translate film and field flattener to other position (9.5" longitudinally)
 - 3. Exchange first half - or all - of condenser system
 - 4. Translate latter half - or all - of condenser system and light source.

The above movement must be done in the correct order as the film's 5X position is about where the lamp was at 50X.

ILLUMINATION SOURCE:
800 WATT ZEISS ARC LAMP

25X1A



-2-

26 August 1964

In both systems the X-Y position set in at either magnification should remain in effect when the magnification change is made.

Since the lamp to be used can be turned on and off, the dual system allows for the use of rigidly mounted lamps and condensers with only a switch in electrical power.

The in line approach requires movement of the components as they are in the way when the magnification is changed.

One last point to consider is that the dual method lends itself to the simple addition of another magnification by repeating the mirror system on the other side with a shorter focal length lens. Swinging the first mirror and translating the film to the other side is all that is required.

Very truly yours,



25X1A

RP:nk

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SECRET
(When Filled In)

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4
CONTRACT INSPECTION REPORT

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

1 Oct 64

INSPECTION REPORT NO. (If final, so state)

3

ESTIMATED COMPLETION DATE

15 Oct 65

NAME OF CONTRACTOR

25X1A

TYPE OF COMMODITY OR SERVICE

Direct (virtual) Image Viewer

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

PER CENT OF WORK COMPLETED

15%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☒ ABOVE AVERAGE

5. ☐ BELOW AVERAGE

7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☐ AVERAGE

6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

24 Sept 64

SIGNATURE OF INSPECTOR

DIVISION

25X1A

P&DS

INS

Report on Phase I, Investigations was received. This report detailed results of theoretical investigations into the production of diffraction gratings for the virtual image viewer. Report was favorable, and Phase II will proceed.

SECRET

(When Filled In)

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4
CONTRACT INSPECTION REPORT

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

29 Aug 64

INSPECTION REPORT NO. (If final, so state)

2

ESTIMATED COMPLETION DATE

15 Oct 65

25X1A

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

"Direct (Virtual) Image Viewer"

THE CONTRACTOR IS ON SCHEDULE

☒ YES☐ NO

PER CENT OF WORK COMPLETED

10%

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☒ YES ☐ NO (If yes, give details on reverse side.)HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING3. ☐ ABOVE AVERAGE5. ☐ BELOW AVERAGE7. ☐ UNSATISFACTORY2. ☒ EXCELLENT4. ☐ AVERAGE6. ☐ BARELY ADEQUATE

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE☐ TERMINATE☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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PROTOTYPES			MANUALS		
DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCT ON AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

4 Aug 64

SIGNATURE

DIVISION

P&DS

INSPECTOR

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25X1A

[] project engineer for [] submitted a report
26 August on his meeting 19 & 20 August with [] of []
[] to discuss two alternate layouts for the optical path of the
virtual image viewer.

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A meeting is to be arranged with [] and the two sub-
contractors before the end of September. At this time, [] will
present the results of Phase I and the work which they have done in
the past two months. During Phase I various methods for achieving
the desired grating characteristics were to be investigated and a
selection made.

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SECRET
(When Filled In)

Approved For Release 2002/06/17 : CIA-RDP78B04747A001500020028-4
CONTRACT INSPECTION REPORT

25X1A

TO:

ENGINEERING SECTION/CB/PD/OL

DATE

29 July 1964

INSPECTION REPORT NO. (If final, so state)

1

ESTIMATED COMPLETION DATE

15 October 1965

NAME OF CONTRACTOR

TYPE OF COMMODITY OR SERVICE

Direct Image Viewer: Follow-on to Feasibility Study Executed under Contract

THE CONTRACTOR IS ON SCHEDULE

☒ YES

☐ NO

THE CONTRACTOR WILL PROBABLY REMAIN WITHIN ALLOCATED FUNDS ☒ YES ☐ NO IF ANSWER IS "NO" ADVISE RECOMMENDATION AND/OR ACTION OF SPONSORING OFFICE, ON REVERSE HEREOF. IF KNOWN, INDICATE MAGNITUDE OF ADDITIONAL FUNDS INVOLVED.

PER CENT OF WORK COMPLETED 5% (theoretical)

HAS AN INTERIM REPORT, FINAL REPORT, PROTOTYPE, OR OTHER END ITEM BEEN RECEIVED FROM THE CONTRACTOR DURING THE PERIOD? ☐ YES ☒ NO (If yes, give details on reverse side.)

HAS GOVERNMENT-OWNED PROPERTY BEEN DELIVERED TO CONTRACTOR DURING THIS PERIOD? ☐ YES ☒ NO (If yes, indicate items, quantity, and cost on reverse side.)

OVERALL PERFORMANCE OF CONTRACTOR

1. ☐ OUTSTANDING

3. ☒ ABOVE AVERAGE

5. ☐ BELOW AVERAGE 7. ☐ UNSATISFACTORY

2. ☐ EXCELLENT

4. ☐ AVERAGE

6. ☐ BARELY ADEQUATE

(On preliminary ground work for Project)

IF OVERALL PERFORMANCE OF CONTRACTOR IS UNSATISFACTORY OR BARELY ADEQUATE, INDICATE REASONS ON REVERSE SIDE.

RECOMMENDED ACTION

☒ CONTINUE AS PROGRAMMED

☐ WITHHOLD PAYMENT PENDING SATISFACTORY PERFORMANCE

☐ TERMINATE

☐ OTHER (Specify)

IF TERMINATION IS RECOMMENDED OR IF THIS IS A FINAL REPORT ATTACH COMMENTS IN NARRATIVE FORM ON CONTRACTOR'S PERFORMANCE AND CERTIFY THAT ALL DELIVERABLE ITEMS UNDER THE CONTRACT HAVE BEEN RECEIVED. THESE INCLUDE, WHERE APPLICABLE, THE FOLLOWING:

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DRAWINGS AND SPECIFICATIONS			FINAL REPORT		
PRODUCTION AND/OR OTHER END ITEMS			SPECIAL TOOLING		
			OTHER GOVERNMENT PROPERTY		

DATE OF LAST CONTACT WITH CONTRACTOR

13 July 1964 (See Attached Trip Report)

SIGNATURE OF INSPECTOR

DIVISION

P&DS

INS

SIGNATURE OF APPROVER

25X1A

25X1A An initial technical meeting was held at []
[] on 13 July 1964 and included:

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Minutes of the meeting were received 17 August from []
Copies were also provided to the local contracting officer.

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Authority to sign the subcontracts was substantially late in coming from the CIA contracting office; consequently, the [] people agreed to meet "on good faith", not having signed a contract for their part of the development. This delay in turn affected preliminary progress by the contractor.

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25X1A

The meeting was wholly concerned with a detailed review and discussion of the work statement. [] chaired the meeting and presented the work schedule and preliminary drawings of the prototype. All corrections and further specifications agreed upon by customer and contractors are enumerated in the attached minutes of the meeting.

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25X1A

25X1A

[] and [] are informed about [] ability to produce phase gratings which could be used as a substitute for [] diffraction gratings if the latter are not up to specifications. Doubt about [] achievement rises only from the fact that, even though they are the only company with the capability, they must still push the state of their art for this particular application. It has been agreed that [] who was made cognizant at the meeting of the potential of [] techniques, will be allowed to continue into Phase II of their effort--i.e., the making of at least two trial test gratings. At that time, we will decide on the merits of their product and the advisability of allowing them to continue. (The subcontract is such that a cut-off can be called between phases.)

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Conceivably, at that stage and if both techniques appear to produce high-quality gratings, it might be wise to simultaneously carry [] and [] efforts for fabrication of a final grating. It is probable that the test gratings will be prepared before the actual optical system is

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25X1A

assembled and available for testing at [] (a 6-month effort as planned). [] is preparing recommendations relative to the use of a simulated optical train for testing the trial gratings. However, the real test can only be made in the prototype's actual optical system. It would be valuable to have both gratings to try in the system if both appear similarly promising.

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Finally, it was reiterated that the piece of equipment itself should be as straightforward as possible, with no sophisticated housing or flourishes. It is to be used primarily to evaluate (in-house) the practical value of a unique mode of viewing. For reasons of adaptability, it was decided to keep the optical train longitudinal (later, for intermediate magnifications). Three square-top filters will be selected to filter a broad spectrum source to alternative bands of the spectrum around 508.6 nm. The viewing technique could also be adapted to stereo.